In Relation to	**)**	
	)	
DECT Forum Petition for Rulemaking	**)**	**RM 11485**
	)	
Service Rules for Advanced Wireless Services in the 2155-2175 MHz Band	**)**	**WT Docket No. 07-195**
	)	
	)	
Service Rules for Advanced Wireless Services in the 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz and 2175-2180 MHz Bands	**)**	**WT Docket No. 04-356**
	)	
	)	
Fostering Innovation and Investment in the Wireless Communications Market	**)**	**GN Docket No. 09-157**
	)	
A National Broadband Plan For Our Future	**)**	**GN Docket No. 09-51**
	)	

Informational Filing in Support of

DECT Forum Petition for Rulemaking (FCC RM 11485) to coordinate the service rules of the UPCS Band with those ultimately adopted for the AWS H Block

The DECT Forum hereby files this additional information in support of its Petition for Rulemaking (the Petition), FCC RM 11485, to revise portions of FCC Part 15 Subpart D, UPCS Band. The information in this filing documents recent trends regarding the use of the UPCS band.

1 Contents

2 Background

The DECT Forum petition argues that rule changes are necessary to avoid foreseeable interference from the AWS band and support future technological developments of equipment using the UPCS band. This filing provides more detailed information on market and technical trends for DECT 6.0 equipment, which has become the dominant user of the UPCS band. It is believed that this information provides additional support for the Petition.

Proposed service rules for the 1915-1920 MHz band are set forth in the Further Notice of Proposed Rulemaking (FNPRM) WT Docket No. 04-356. The DECT Forum believes that there will be harmful interference to the UPCS band if the proposed service rules are adopted. It is however possible to decrease the potential damage to the UPCS band by implementing changes in FCC Part 15 Subpart D[1] described in this Petition. These changes have no negative impact on the H Block. Furthermore, these changes are recommended by the UPCS equipment vendors, because they improve the utilization of the UPCS band, even in the absence of H Block interference. The Petition argued that with the immanent introduction of the H Block services, the need for these improvements is both necessary and urgent.

[1] 47CFR15.301 through 47 CFR15.323

3 The DECT Forum

The DECT Forum is an international industry association embracing suppliers and operators of DECT based terminals, systems, and networks. DECT stands for "Digital Enhanced Cordless Telecommunications" and denotes a radio technology suited for voice data and networking applications with range requirements up to a few hundred meters. The DECT Forum represents the interests of the DECT industry with the following primary objectives:

- To promote DECT as the worldwide cordless communication standard.
- Pursue worldwide harmonization of frequencies for DECT products.
- To provide an interactive forum for sharing information and experience between regulatory and standardization agencies, operators, users and manufacturers.
- To manage the evolution of DECT in a way which protects legacy investments and permits orderly service migration and expansion.

CAT-iq technology was launched at the ITU Telecom World 2006 in Hong Kong on 4-8 December 2006. CAT-iq stands for Cordless Advanced Technology – internet and quality. It is being developed to support new consumer product categories in the home. CAT-iq is positioned in the broadband telephony application field, but embraces technology convergence with other application fields. The DECT Forum is the international association for the DECT/CAT-iq industry and is guiding the certification of the first CAT-iq wireless communication devices for broadband home connectivity. CAT-iq is designed for the next generation of IP-voice and IP-radio services, with plans for migration into the home gateways, enabling consumers to manage their home communication, information and entertainment needs.

Organizationally DECT CAT-iq is a collaborative effort of three organizations.

The DECT Forum represents the DECT/CAT-iq industry, including equipment manufacturers and chip suppliers. It drives the certification program to guarantee interoperability and promotes the technology globally.

The Home Gateway Initiative is the industry association for major operators. It advices and supports prioritization of use cases and feature sets of new technologies and interoperability.

The European Telecommunications Standards Institute (ETSI) creates the standards and test specifications for the certification programs.

Figure 1 presents typical home applications available in 2009. DECT CAT-iq will be further developed, as discussed later in this document, to extend the number of application and support other fields. As will be discussed, the UPCS band and DECT CAT-iq create a compelling for a range of applications that require a high level of interference protection and assured access for communication.

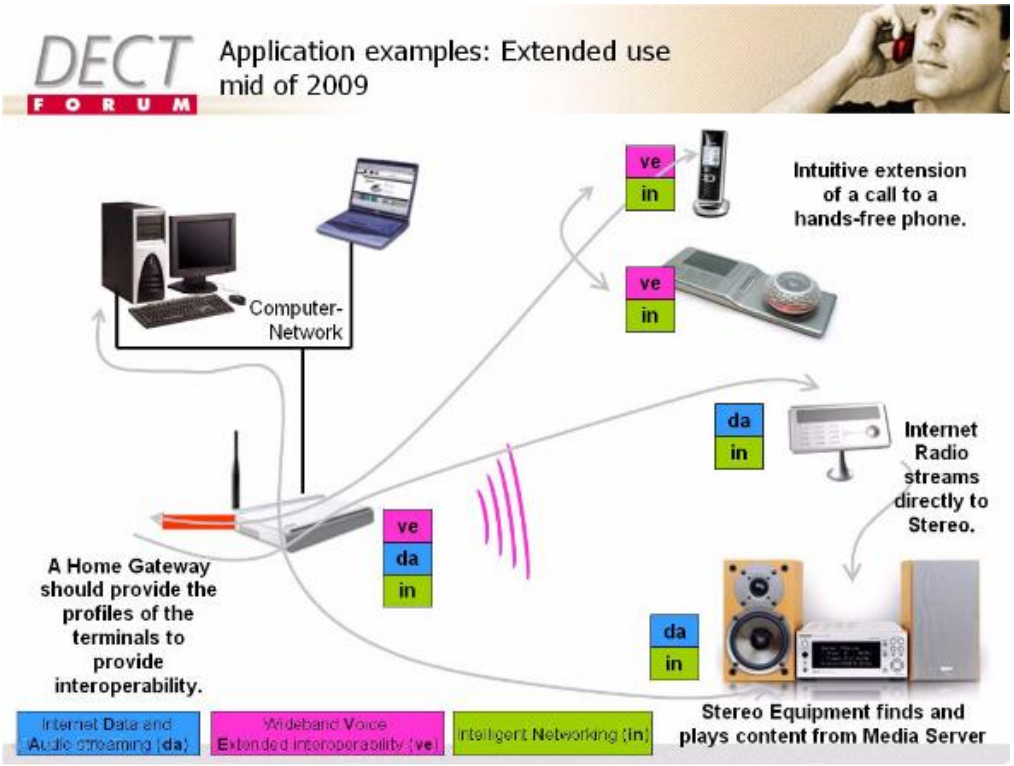

Figure 1 – Examples of Home Applications of DECT in 2009

4 Importance of the UCPS Band with DECT 6.0

The UPCS band together with DECT 6.0 brings together a very important set of characteristics. The UPCS band offers:

1. An unlicensed band that is generally available for a wide range of applications.
2. A spectrum etiquette that minimizes the potential for interference between users of the band. This spectrum etiquette makes the UPCS band very different from other unlicensed bands, particularly the ISM bands.
3. The spectrum etiquette also gives assured channel access. Once a device has a channel it can continue to use it for up to 8 hours, assuring availability of spectrum for uninterrupted communications.

DECT 6.0 provides:

1. An internationally recognized RF protocol. DECT is used in over 110 countries with many millions of products shipped.
2. Low cost chip sets with high reliability deriving from widespread use.
3. Product development tools and infrastructure, which supports timely development of low cost products and assures availability of product developers who are experienced with the protocol.
4. Support for high density deployments with minimum support requirements for network management.
5. Excellent communications security.

This combination of characteristics, interference protection, assured access, low cost components, product development support and ease of network management, creates a compelling value proposition for a number of products and an excellent solution for products that must have high reliability for real-time services. As UTAM reported in its semi-annual report to the FCC in July of 2006:

> *The market for UPCS devices continues to expand as applications of wireless technology continue to penetrate all facets of business, the home, education and health care.*

….

UPCS, and the use of enterprise-based wireless systems has been an integral

part of conducting business for some time. From small businesses to large businesses, from small elementary schools to college campuses, the use of these unlicensed wireless devices has improved productivity and has made communications more convenient. In many industries, the use of these devices is almost a competitive necessity; in others, such as nuclear power plants and hospitals, these systems serve mission-critical applications because of the heightened interference protection that UPCS devices provide.[2]

This trend continue with the combination of UPCS and DECT 6.0 being selected as the preferred solution for applications in healthcare, the smart grid and other applications that require the characteristics this combination offers. As will be further discussed later in this report, this set of characteristics offers a compelling solution for new applications that require secure, high reliability wireless communications.

5 History & Trends in Cordless Technologies

Over the years 7 frequency bands have been used by cordless phones. These are:

- 1.7 MHz 1.64 MHz to 1.78 MHz. This band had up to 5 Channels and was used by analog cordless phones.
- 43–50 MHz Base: 43.72-46.97 MHz, Handset: 48.76-49.99 MHz, allocated in 1986 for 10 channels, and later 25 Channels, FM System.
- 900 MHz 902–928 MHz. Allocated in 1990, became a dominate band for cordless phones but more recently has lost popularity due to band crowding.
- 1.9 GHz 1920-1930 MHz. Rule changes in 2004 made this band available for general consumer cordless phones, using the DECT 6.0 standard. Outside the US DECT uses 1880-1900.
- 2.4 GHz Allocated in 1998, this became a very popular band for cordless phones.

[2] UTAM Report to the FCC, July 1, 2006, filed under GEN Docket No. 90-314.

- 5.8 GHz Allocated in 2003 due to crowding on the 2.4 GHz band this band saw many cordless phones introduced but later lost popularity after the UPCS band became available.

The first cordless phones used the 1.7 MHz band. These phones were large by today's standards and typically had large metal telescoping antennas. Channel selection was done manually by the user. These phones were very susceptible to interference and also eavesdropping. This technology is now obsolete and is no longer being sold.

The 43-50 MHz frequency band was the second frequency band to be used by cordless phones. It had a large installed base in the early 1990s. The popularity and resulting over crowding of the band led to allocation of additional frequencies, increasing the band from 10 to 25 channels. This band is now also considered obsolete and is not in general use. Today this frequency band is used by toys, a variety of inexpensive consumer products, like wireless intercoms, but is not used by cordless phones.

The 900 MHz ISM band was the next destination for cordless phones and it is still in use. Although declining in use by cordless phones there is very significant install base. Cordless phones in this band had up to 30 auto selecting channels and were available in three technologies; analog, digital, and digital spread spectrum (DSS). The FCC allows DSS phones to transmit to a full power of 1 watt, which allows increased ranger over analog and digital models.

Today, virtually all telephones sold in the US today use either the 900 MHz, 2.4 GHz, or 5.8 GHz ISM bands or the 1.9 GHz, UPCS band, though legacy phones remain in use on the older bands. There is no specific requirement for any particular transmission mode on 900, 1.9, 2.4, and 5.8. The 1.9 GHz UPCS band is used by the DECT 6.0 phone standard and is considered more secure and interference resistant than the other options. Currently the 1.9 GHz UPCS band and DECT 6.0 account for over 70% of the shipping volume of cordless phones in the US market and the trend is growing.

5.1 Trends in FCC Equipment Grants

5.1.1 UPCS Band

In 2004 two changes in the UPCS band service rules stimulated dramatic increase in the use of the band. The rules for the UPCS band were modified so that the DECT protocol could operate in the band and the non-nomadic requirement was removed.

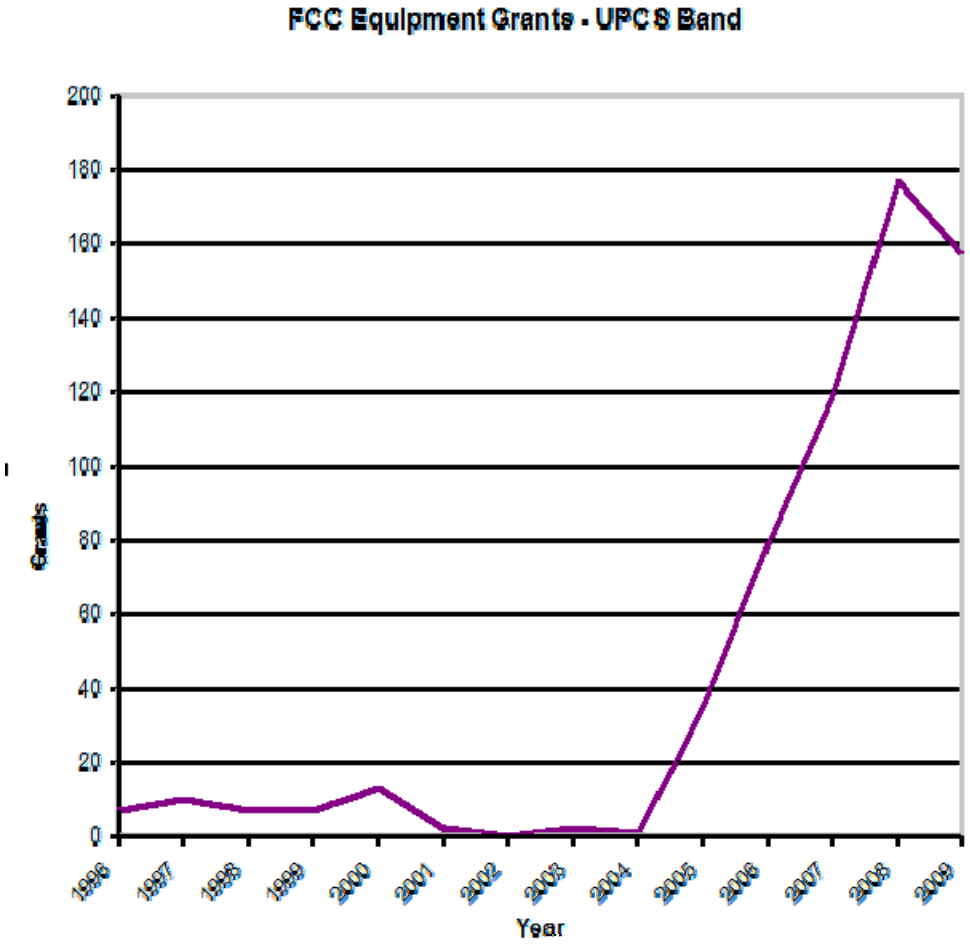

Figure 2 – FCC Equipment Grants for UPCS Band

Figure 2 illustrates the trend, showing the in equipment grants from 2004 to the present.

In 2003 there were only 2 equipment grants for the UPCS band.[3] In 2004 only 1 grant was issued.[4] All of these grants were for cordless phones.

[3] FCC ID O4M9P23 and AY5SN531PSTH-A
[4] FCC ID AY5PS3D

In to-date in 2009 there have been 160 equipment grants. The vast majority are for voice communication products, mostly cordless phones using the DECT 6.0 standard. However, an increasing number of new applications are being introduced to the band.

Based on the FCC grants, information from UTAM filings and other sources it is estimated that the UPCS band saw approximately 500,000 individual units shipped each year, from 2003 to 2005. However, with the rule changes in 2004-2005 the shipping volume rose dramatically with an estimated 1,850,000 units in 2006 and 3,500,000 in 2007. The DECT Forum projects that worldwide shipments of DECT CAT-iq products will reach 30 million units in 2009, as will be discussed in more detail later in this report. The percentage of that number projected to be shipments in the USA is currently unavailable but is expected to represent a significant portion of worldwide shipments.

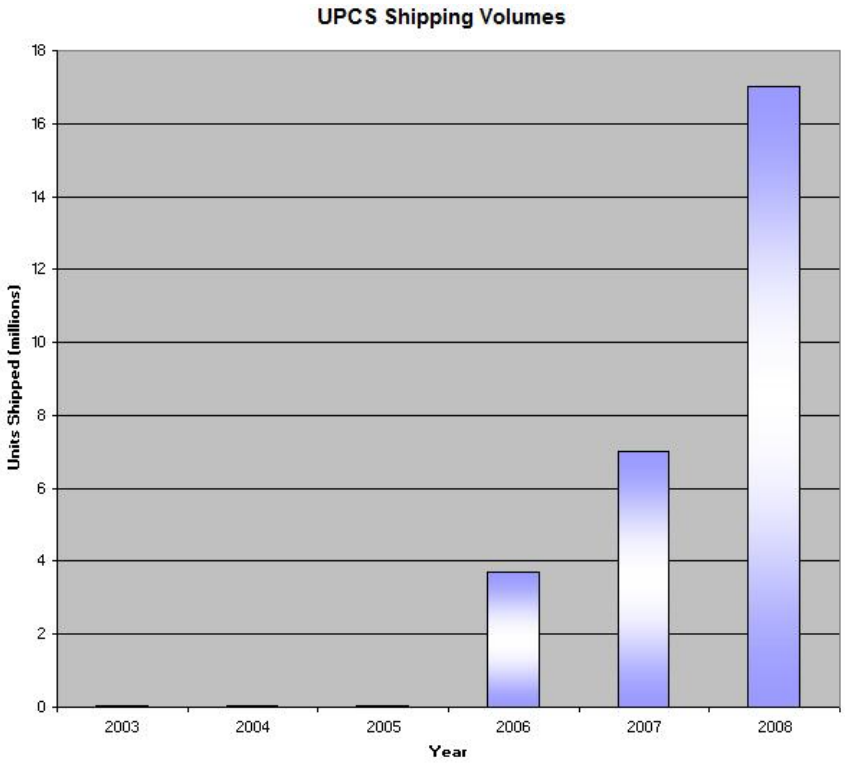

Figure 3 – Estimate of UPCS Units Shipped

5.1.2 ISM Bands

By 2004 the 900 MHz, 2.4 and 5.8 GHz ISM bands were the dominant frequency bands used by cordless phones. Figure 4 through Figure 6 show the equipment grants in each of these bands, by product category. As can be seen total grants for the 900 MHz band leveled off in

2000. Grants in the 900 MHz ISM band continue to be level due to band crowding and the interference problems that result.

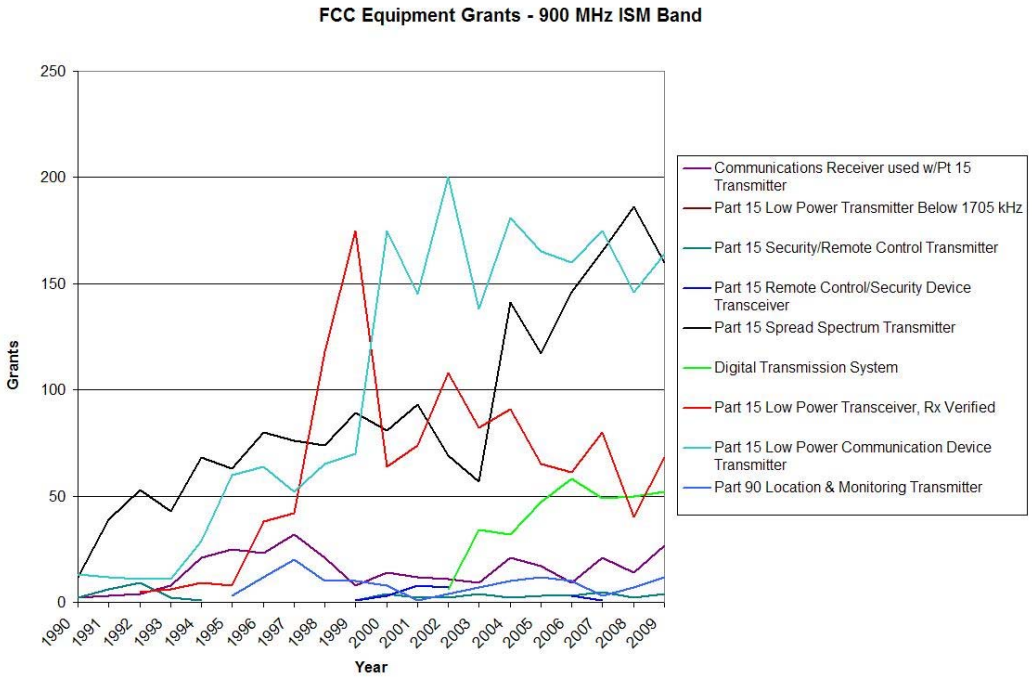

Figure 4 – 900 MHz Band Equipment Grants (1990-2009)

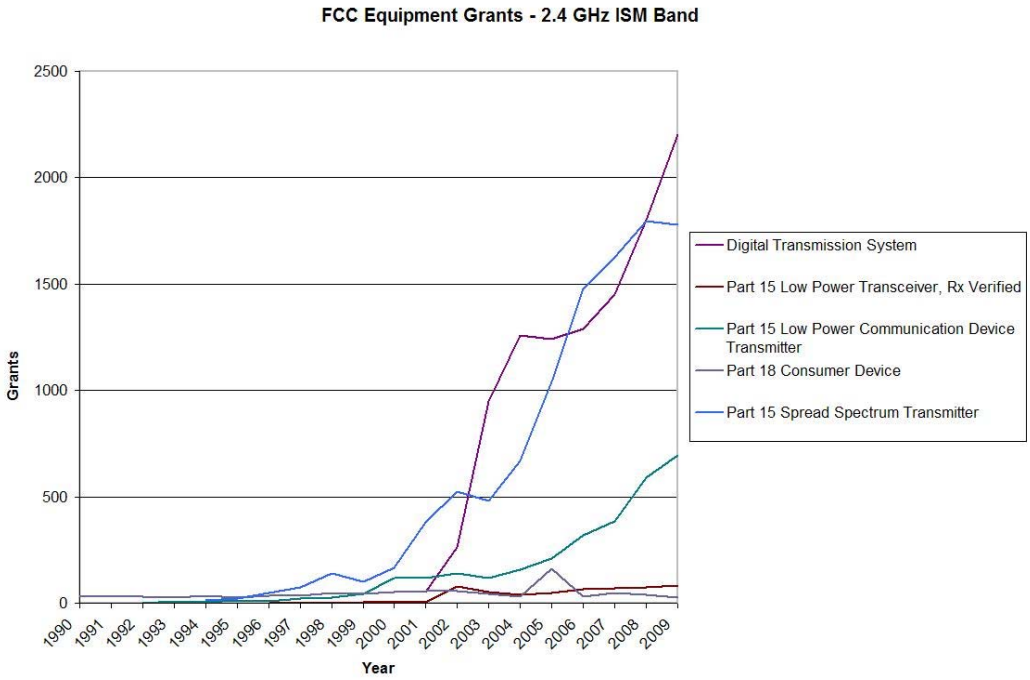

Figure 5 – 2.4 GHz Band Equipment Grants (1990-2009)

The 2.4 GHz band has been far and away the most popular ISM band, as measured by equipment grants. Data services such as wireless networking make heavy use of the band. The 5.8 GHz ISM band has seen significant increase activity since 2002.

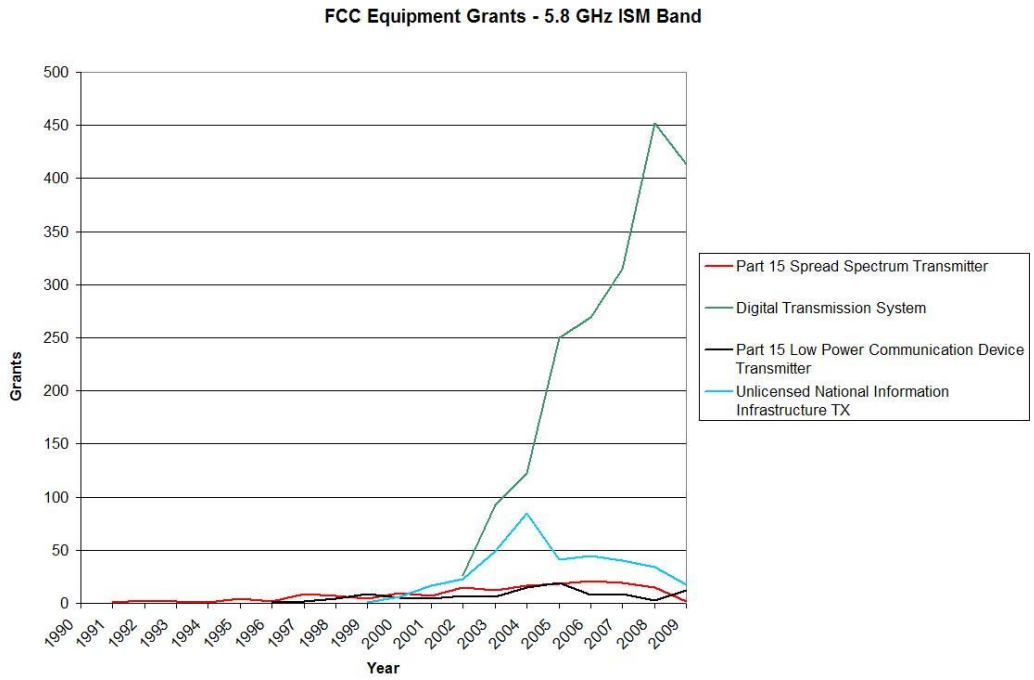

Figure 6 – 5.8 GHz Band Equipment Grants (1990-2009)

Figure 7 presents the total number of grants in each of the ISM bands from 1990 to 2009. The 2.4 GHz band has seen explosive growth since 2000 and numerically is by far the most heavily used of the ISM bands. The 5.8 GHz band continues to grow as well while the 900 MHz band is flat.

For the purposes of this analysis it is clear that both the 2.4 and 5.8 GHz band are heavily used now and will be even more crowded in the future. For interference sensitive applications these will be increasingly less appealing. Separate from actually interference is the problem of assured access to spectrum. With so many devices using the band in an increasing number of situations devices will not be able to find spectrum in which to transmit when they need to send time critical data.

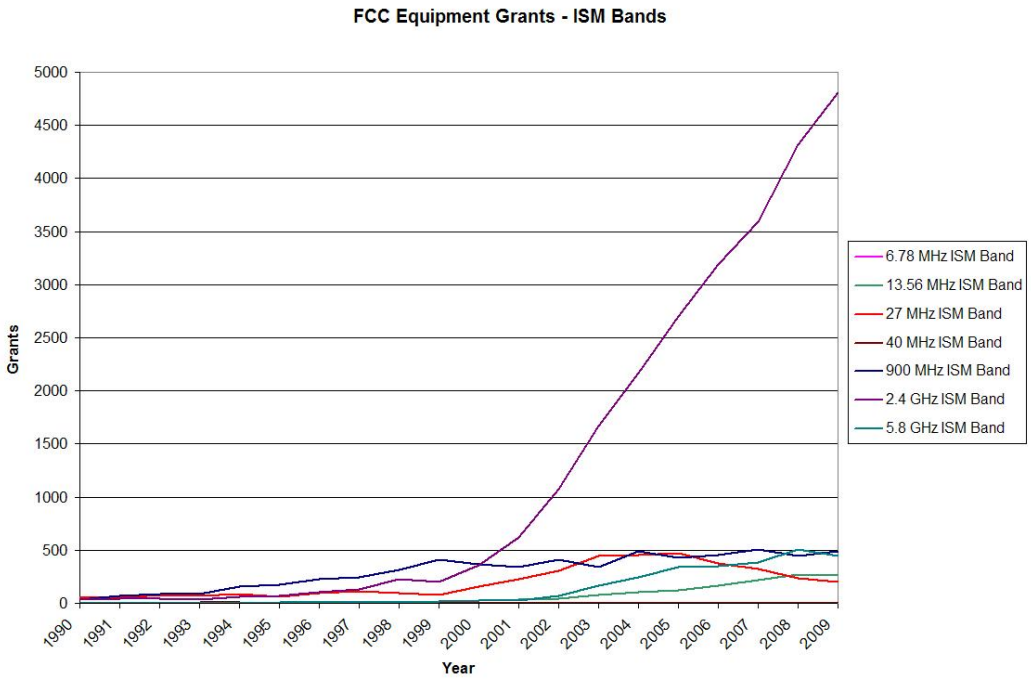

Figure 7 – Total Equipment Grants by ISM Band (1990-2009)

5.2 RF Protocol Standards

A number of RF protocols have been used in cordless phones. An RF protocol can be used in one or more frequency bands. Frequency bands can support one or more RF protocols. Hence the RF protocol is an independent variable from the frequency band in which it is used. However, as has been discussed the combination of frequency band and RF protocol create a set of attributes that product develops consider when making their selection. In this section the range of available RF protocols is explored.

Table 1 lists the RF protocol standards intended to support voice communications as a primary function. Beyond these standards product developers could and often did develop proprietary RF interfaces using a variety of standard RF techniques.

Table 1 – RF Protocols Developed with Voice Communication as a Primary Purpose

Technology	Promoter	Technology introduced	Market size and status	Region	Frequencies and bands	Primary information source
Bluetooth	Bluetooth SIG	1998	Large, active and growing	Multiple	2.4 GHz	Bluetooth specification v1.0
CT0	Various proprietary	Circa 1980	Large, legacy since ca. 2000	Multiple	1.6, 1.8, 26, 27, 41, 46, 49 MHz	Tuttlebee[5] 116 -117
CT1	CEPT	1983	Large, legacy since ca. 2000	Europe	914 – 915, 959 – 960 MHz	Tuttlebee 117
CT1+	CEPT	1990	Mid, legacy since ca. 2000	Europe	885 – 887, 930 – 932 MHz	Tuttlebee 117
CT2	BTI	1987	Large, varies, some regions still active	Multiple	Near 900 MHz, varied by region	Tuttlebee 118, 353, Phillips et al 17
CT3	Ericsson	1991	Mid, legacy since ca. 2002	Multiple	Near 900 MHz, varied by region	Tuttlebee 158

[5] Tuttlebee, Walter H. W., Cordless Telecommunications Worldwide. London UK: Springer Verlag, 1997 ISBN 3540199705

DECT	DECT Forum	1991	Large, active and growing	Multiple	Near 1900 MHz, varied by region	Phillips et al[6] 18
UPCS (Proprietary)	WIN Forum	1993	Small, legacy since 2005	United States	1910-1930 MHz	
UPCS/LE-PCS	ANSI C63 SC7	2005	Mid, active and growing	North America	1920 – 1930 MHz	C63.17-2006
dSST	Conexant	Circa 1997	Large, legacy since ca. 2004	North America	902 – 928 MHz	Author's personal experience
PACS-UA	TIA, JTC	1995	Small, legacy since 2005	North America	1920 – 1930 MHz	Tuttlebee 132
PACS-UB	TIA, JTC	1995	Small, legacy since 2005	North America	1920 – 1930 MHz	Tuttlebee 132
PCI[7]	TIA, TR41.6	1995	Small, legacy since 2005	North America	1920 – 1930 MHz	Tuttlebee 365
PHS[8]	RCR	1993	Large, active and growing	Japan, China	1895 – 1918.1 MHz	Tuttlebee 163
PWT isochronous[9]	TIA, TR41.6	1995	Small, legacy since 2005	North America	1920 – 1930 MHz	Phillips et al 19, 45

[6] Phillips, John A. and Gerald Mac Namee, Personal Wireless Communication With DECT and PWT. Norwood MA: Artech House 1998 ISBN 0-89006-872-0

[7] Personal Communications Interface (PCI)

[8] Developed by the Nippon Telegraph and Telephone Corporation, the Personal Handyphone System (PHS) is a lightweight portable wireless telephone that functions as a cordless phone in the home and as a mobile phone elsewhere. The Personal Handyphone also handles voice, fax, and video signals.

[9] Personal Wireless Telecommunications (PWT).

Table 2 lists options available for the short-range data and control communications via standard radio interfaces. Voice communications is sometimes an additional primary purpose, or a secondary purpose but with some protocols voice communication is not supported.

Table 2 – RF Protocols Developed with Data Communication as a Primary Purpose[10]

Technology	Promoter	Technology introduced	Market size and status	Region	Frequencies and bands	Primary information source
Bluetooth	Bluetooth SIG	1998	Large, active and growing	Multiple	2.4 GHz	Bluetooth specification v1.0 to 2.0
Bluetooth 3.0	Bluetooth SIG based on WiMedia Alliance UWB technology	2008	Specification in development	Multiple	6.0 – 10.6 GHz	Bluetooth specification v3.0 www.bluetooth.com
CWUSB	USB-IF based on WiMedia Alliance UWB technology	2006	1st products on market. Appears to have strong potential.	Multiple	3.1 – 10.6 GHz	www.usb.org
802.11-1997	Various	1997	Mid, legacy since 1999	North America	2.4 GHz	www.wi-fi.org; 802.11 at wikipedia
802.11a	Wi-Fi Alliance	1999	Mid, active	Multiple	5 GHz	www.wi-fi.org; 802.11 at wikipedia
802.11b	Wi-Fi Alliance	1999	Large, active and growing	Multiple	2.4 GHz	www.wi-fi.org; 802.11 at wikipedia
802.11g	Wi-Fi Alliance	2003	Large, active and growing	Multiple	2.4 GHz	www.wi-fi.org; 802.11 at wikipedia
802.11h	Wi-Fi Alliance	2003	Large, active and growing	Europe	2.4 GHz	www.wi-fi.org; 802.11 at wikipedia
802.11n (draft)	EWC	2006	Mid, active and growing	Multiple	2.4, 5 GHz	www.wi-fi.org; 802.11 at wikipedia
CT2	BTI	1987	Small, legacy since ca. 2000	Multiple	Near 900 MHz, varied by region	Tuttlebee 118, 353, Phillips et al 17

[10] In some cases, like Bluetooth voice communication was also a primary purpose of the protocol. In others, like WiFi, data communication is the primary purpose but voice communication is a secondary purpose. In yet others only data communication is intended.

CT3	Ericsson	1990	Small, legacy since ca. 2000	Multiple	Near 900 MHz, varied by region	Tuttlebee 158
DECT	ETSI	1991	Mid, active	Multiple	Near 1900 MHz, varied by region	Phillips et al 18; DECT Forum site
PHS	RCR	1993	Mid, active	Japan, China	1895 – 1918.1 MHz	Tuttlebee 163; various web sales offers
Hiperlan	ETSI BRAN	1996	Small, legacy since 2000	Europe	5 GHz	Wikipedai article on Hiperlan
HiperLAN2	HiperLAN2 Global Forum	2000	Small, active	Europe	5 GHz	wi-fiplanet.com/tutorials/article.php/990101
HomeLink	Johnson Controls	1995	Large, active and growing	Multiple	Varied by region	Johnson Controls, Johnson Controls gmbh
HomeRF	HomeRF Working Group	2001	Small, legacy since 2003	North America	2.4 GHz	Randy Rich, former HomeRF employee
UWB-OFDM	WiMedia Alliance	2005	Early marketing	Multiple	3.1 – 10.6 GHz	ECMA-368
UWB-DS	UWB Forum	2005	Appears to have been defeated by UWB-OFDM.	Multiple	3.1 – 10.6 GHz	Uwbforum.org
WiBro	TTA Korea	2005	Early marketing	Korea	2.3 – 2.4 GHz	www.wibro.or.kr
X.10	X10 Ltd.	1989	Large, active and growing	Multiple	310 MHz; varied by region	Wikipedia; www.x10.com
ZigBee (IEEE 802.15.4)	ZigBee Alliance	2004	Early marketing	Multiple	Near 900 MHz, 2.4 GHz	www.zigbee.org
Z-wave	Z-wave Alliance	2005	Early marketing	Multiple	Near 900, varied by region	www.z-wavealliance.org

5.3 New Applications

As was stated earlier in this section, the characteristics of the UPCS band and DECT 6.0 creates a unique set of characteristics that create a compelling solution for many applications. Applications in healthcare, the smart grid, security and other sensitive applications are being drawn to the UPCS band and DECT 6.0.

Figure 8 – DECT 6.0 used in a Wireless Microphone Product [11]

[11] Revolabs Fusion's interference free wireless microphone product.

http://www.revolabs.com/pdf/product_manuals/fusion_4-8_prod_spec.pdf

In 2003-2004 there were only 3 equipment grants but all were for cordless phone products. In 2008-2009 the number of FCC equipment grants has risen to a range of 160-200. While cordless phone products continue to dominate the band a number of new applications are being introduced. Some of these applications are predictable extensions for a voice communication protocol, speakerphones, headsets, VoIP phones and wireless microphones.

DECT is also finding increasing use as a wireless component in healthcare products. Ascom is one company offering DECT as part of a hospital enterprise solution, integrating clinical, management, financial and technical systems.

Figure 9 – Ascom captions its DECT 6.0 Healthcare products "When Every Second Counts"

The wireless component improves mobility and data delivery. In addition, better process efficiency reduces time to improve the quality of care. Patients receive better information and quicker response to medical alarms. These benefits have the potential to save lives.

Other innovative healthcare applications are being introduced for hospital enterprise management, elder care and assisted living and home tele-health applications.

Figure 10 – Healthcare Wristband or Pendant[12]

Figure 11 – Firecom's DECT 6.0 Headsets for 1st Responders and Emergency Personnel[13]

[12] NEC Philips M155 DECT Messenger, healthcare watch or pendent

http://www.nec-ipdect.com/sheets/M155_messenger.pdf

[13] http://www.firecom.com

Figure 12 – DECT 6.0 used in a Hazmat Communication System[14]

5.4 DECT Roadmap

The DECT standard and its RF protocol continue to develop, responding to market trends. In Figure 13 the DECT Forum's roadmap is presented. DECT CAT-iq is the next generation for the DECT standard. The first release of CAT-iq increased the bandwidth and introduced high definition voice capability. The second release introduces multi-line capability and a number of telephony improvements. Versions 3 and 4, scheduled for introduction in 2011-2012 will improve support for data, internet integration and network management.

[14] Ceotronics Hazmat communications system

5.4.1 Broadband Services and Smart Grid Support

A primary focus for DECT CAT-iq development is for “home control” and “office control” supporting broadband distribution and smart grid services. It is important that wireless networks not unconsciously fall into the trap of acting like wired network, allowing avoidable bottlenecks to develop. With wireless multiple services and operate simultaneously without interference, if separated appropriately. In this context the ISM bands play and important role but DECT CAT-iq brings a unique addition for services that require assured access and high levels of interference protection. Services like medical emergency alerts, security systems and similar services require assured access on a real time basis. The UPCS band offers this and DECT CAT-iq connects those capabilities to internationally standardized protocol that the ITU-R has integrated into an integrated plan for wireless communications.

The DECT standard is developed as an engineering standard through ETSI, which in turn integrates it into the ITU-R worldwide spectrum plans. The standards for higher speed version of DECT have already been completed by ETSI but have yet to be introduced to the market. DECT is a core technology adopted by the ITU-R for low power voice communication support. As such it is part of an integrated communications strategy with cellular telephony and other ITU-R recognized communication services.

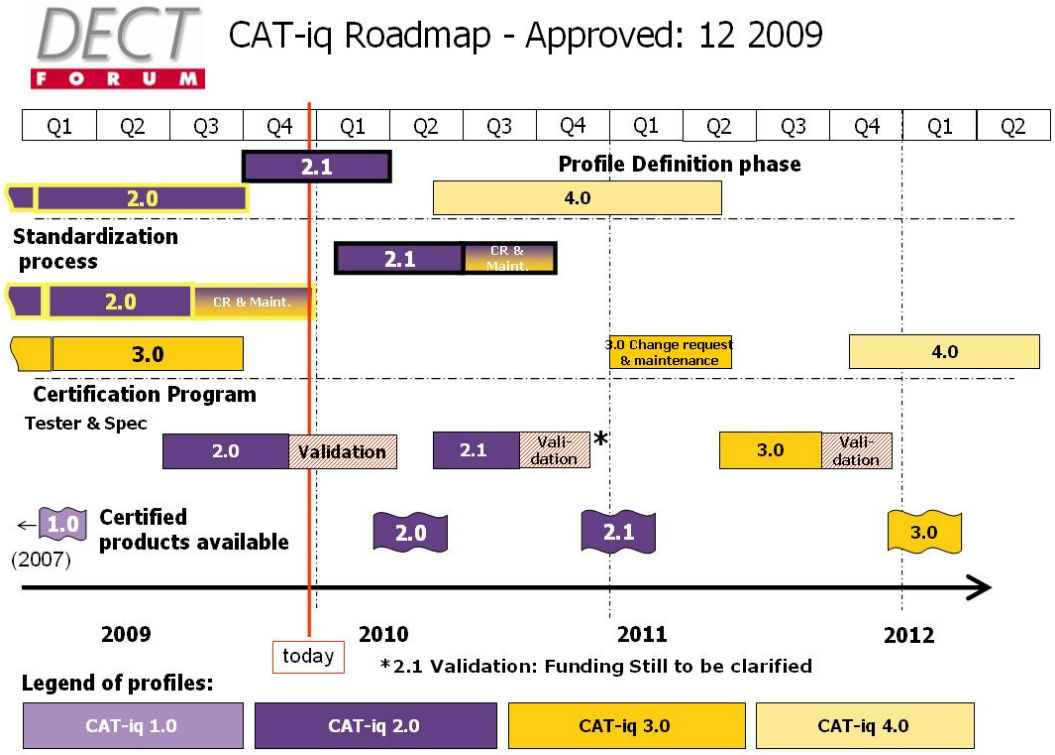

Figure 13 – DECT CAT-iq Roadmap

Figure 13 Presents the DECT CAT-iq roadmap. DECT CAT-iq is being developed in four stages. Stage 1 focused on delivery of high definition voice. This stage is complete and products are already on the market, Figure 14. Stage 2 adds multiline support and a variety of other telephony features, facilitating simultaneous voice and data services. Stages 3 and 4 continue the progression toward internet integration and intelligent networking.

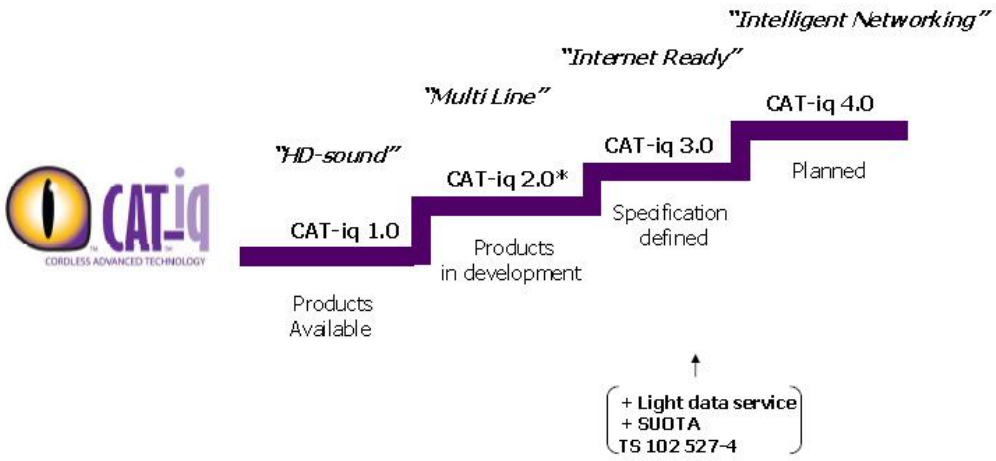

Figure 14 – DECT CAT-iq Development Plan

Figure 15 – Home Control and Other Services Supported by DECT CAT-iq

A wide variety of home control and entertainment services are projected for DECT CAT-iq. The protocol is being designed to not only support these services but coordinate their wireless data needs in a way that is interference free and assures access to high priority services.

DECT CAT-iq is not just a future possibility but has products shipping today. DECT CAT-iq is on course to ship 12 million gateways and 18 million handsets in 2009. Those numbers are projected to grow to 82 million gateways and 154 million handsets in 2013.

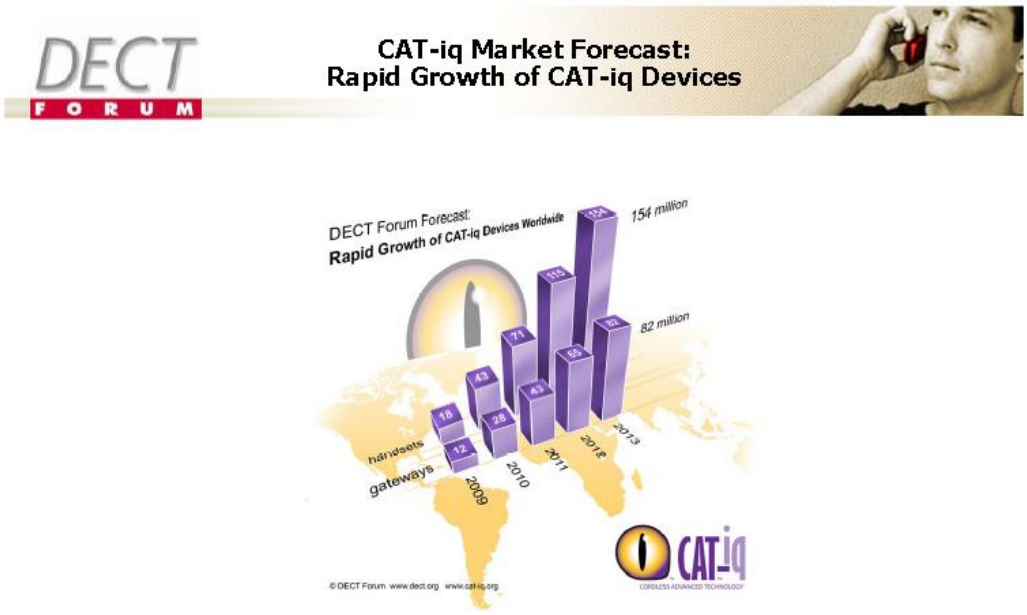

Figure 16 – Market Forecast for DECT CAT-iq[15]

[15] DECT Forum Market Forecast: worldwide growth of CAT-iq enabled gateways and CAT-iq handsets 2009 - 2013.

6 DECT Market Share

Since the modification of the rules for the UPCS band in 2004 and the removal of the non-nomadic requirement the UPCS band has become the preferred frequency band for cordless phones. This trend has accelerated in recent years. In 2009 DECT 6.0 represents over 70% of the cordless phones sold in the US, as shown in Figure 17, based on data from the Consumer Electronics Association (CEA) on factory sales of cordless phones.[16]

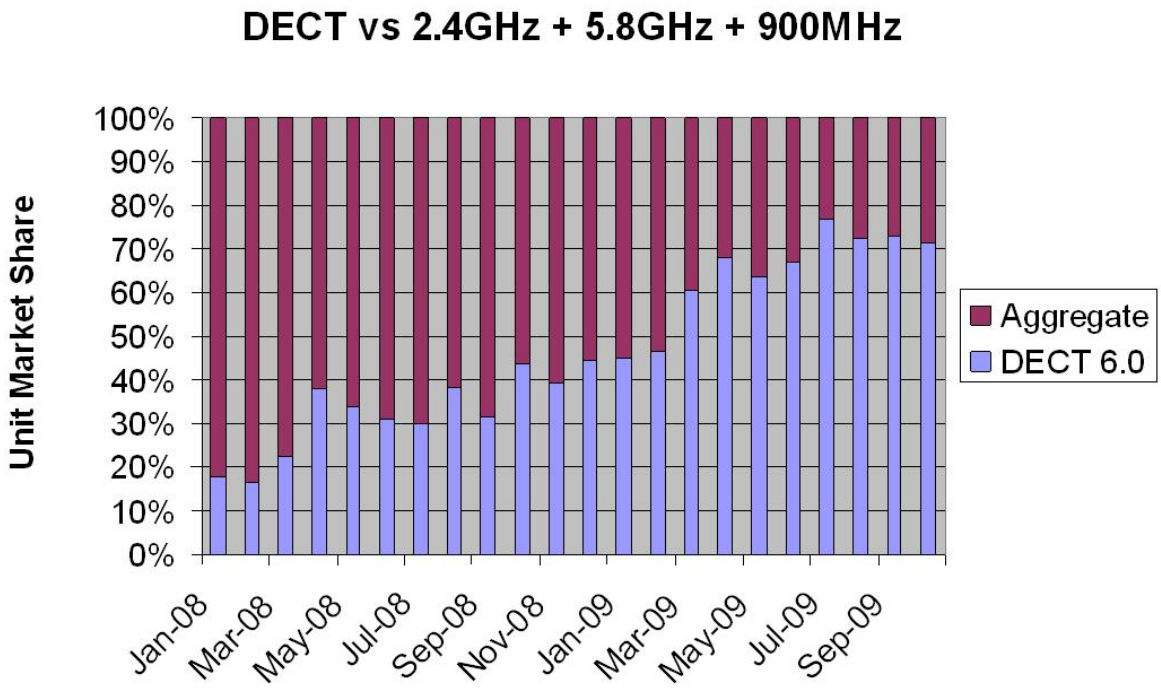

Figure 17 – DECT 6.0 Market Share of the Cordless Phone Market

In response to a question from the FCC at an October 13, 2009 meeting Panasonic filed a statement saying:

> *The purpose of this filing is to place on the record of these proceedings updated market statistics for cordless phones, as requested by Commission staff during a meeting on Oct 13, 2009.*

[16] The data presented in Figure 17 was obtained from the Consumer Electronics Association (CEA) Market Research.

As discussed in that meeting, these statistics show that the market for cordless phones has overwhelmingly moved to DECT technologies. Panasonic's own forecast is that this trend will continue, so that by FY 2010 (April 2010-March 2011), the market for cordless phones will be approximately 90% DECT by dollar revenue share.[17]

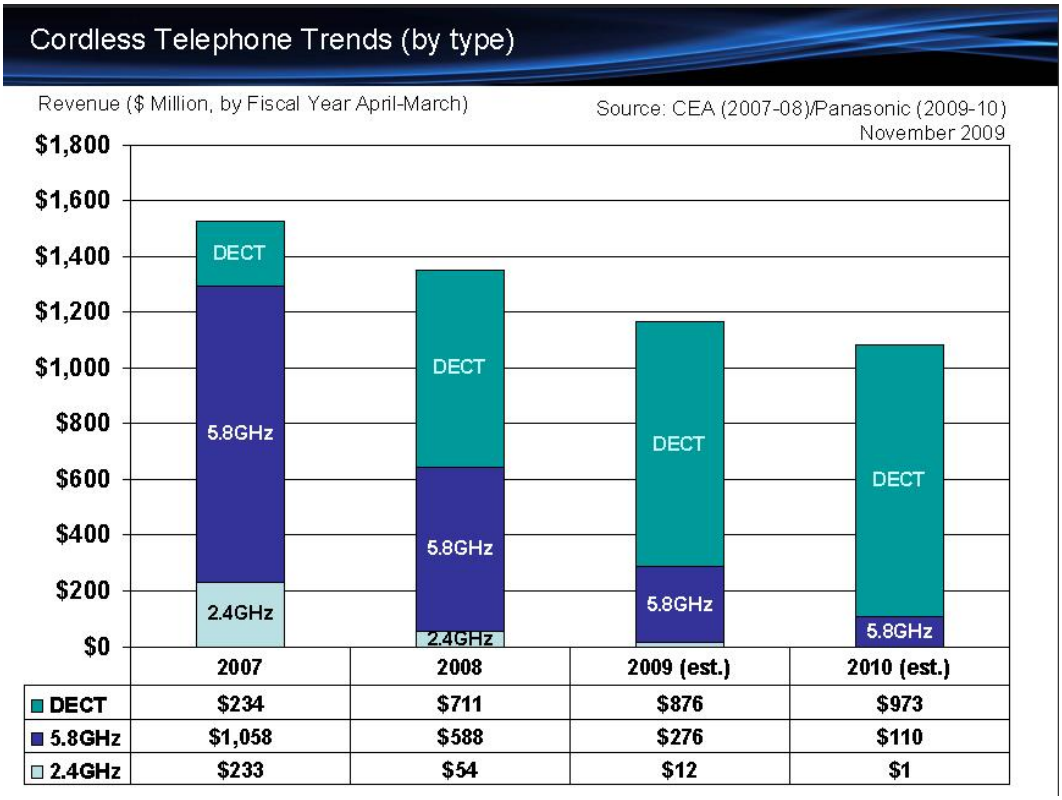

Figure 18 – Cordless Phone Trends by Frequency Band/RF Protocol

In a July 2009 news release discussing the global cordless market, MZA reports:

DECT technology continued to dominate the market and increased its share of total base unit sales from 49% in 2007 to 61% in 2008. The market for 2.4GHz and 5.8GHz other digital technologies more than halved impacted by the fact that in many territories vendors are focusing

[17] Ex Parte filing by Panasonic in RM-11485 dated November 23, 2009.

more on DECT than these technologies. Analogue volumes also declined but at a much slower rate as these cost effective models still attract a large volume of customers in many world regions.

The greatest decline in volume was seen in North America where, despite strong growth in DECT volumes and DECT market share, the overall market declined by 20%. The greatest declines in volume in North America were seen in the digital 2.4GHz and digital 5.8GHz sectors as many suppliers active in this sector focused more heavily on DECT technology. Analogue declines were less pronounced as these models at competitive price points continued to attract cost conscious customers.[18]

The trend toward DECT is both dramatic and continuing. Based on CEA and Panasonic Data DECT cordless phones are expected to produce $1 billion of revenue in 2010. While the trend for cordless phones is declining, DECT represents a growing percentage of this product category. What this data does not show are other applications for DECT. In particular voice and data integrated services are showing significant growth and broadband deployment and smart grid applications are expected to experience dramatic growth.

DECT CAT-iq is being developed to support applications beyond pure cordless telephony. The next stages of development are CAT-iq embedded home gateways that provide more services and applications than simple Internet routing. Several equipment manufacturers are already implementing CAT-iq into the next generation of home gateways. In these gateways CAT-iq is the third integrated in-home distribution technology besides LAN and WLAN.

[18] August 18, 2009 press release titled "MZA - Global Cordless Phone Market", available at: http://www.dect.org/news.aspx?id=46

In 2007 the DECT Forum released the following market forecast for DECT/CAT-iq enabled gateways (in thousand units):[19]

Region	2007	2008	2009	2010
Asia Pacific	251	338	564	762
Europe	4,609	8,318	13,094	18,910
Latin America	37	52	85	124
MEA	20	68	133	248
North America	218	572	901	1,370
Total World	**5,597**	**10,322**	**16,603**	**23,742**

The DECT Forum, operators and service provider are currently driving this development. All parties demand reliable and strong interoperability between products of different suppliers, assured by the CAT-iq certification program.

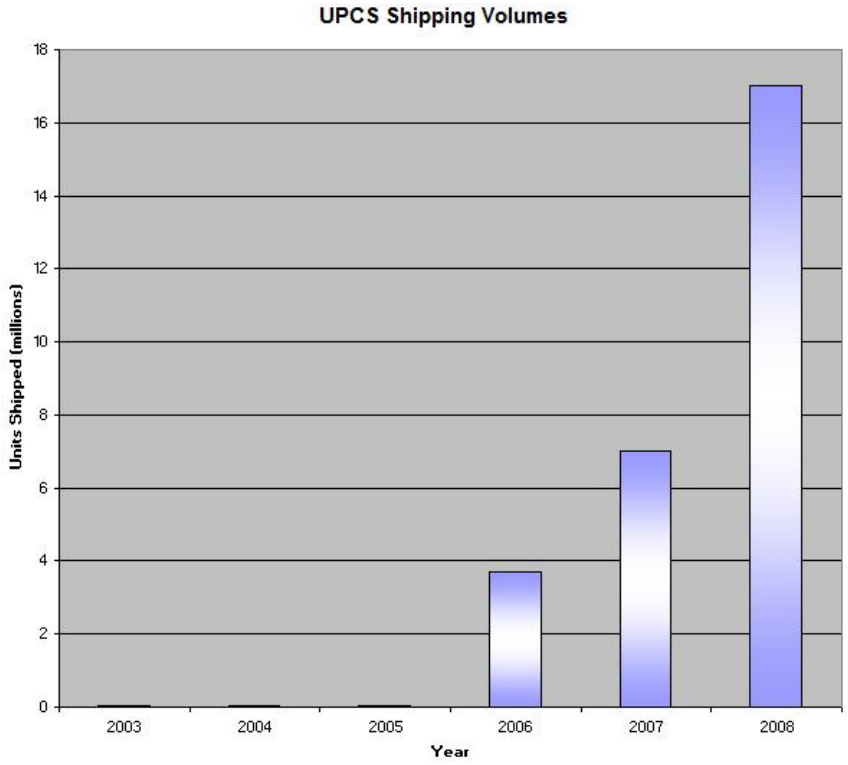

Figure 19 – Estimate of UPCS Units Shipped

[19] DECT Forum press release dated March 22, 2007.

Figure 19 reports the dramatic increase in UPCS devices. A survey of FCC equipment grants reveals that this increase is composed of both the move to the UPCS band by traditional cordless phones and new applications, typically delivering voice communication, increasingly integrated with other data services. As these new applications develop and are introduced to the market new types of equipment will be introduced to the UPCS band, increasing its utility but also making protection from interference and support for high density installations increasingly important.

7 Summary

This document is providing additional information to assist in the review of its petition for rulemaking. The DECT Forum anticipates additional information becoming available over time and will provide that information in succeeding informational filings.

In its petition the DECT Forum requested two changes to 47CFR15.323(c)(5):

1. The threshold requirement associated with the least-interfered-channel rule and
2. The minimum number of channels to be monitored under the least-interfered-channel rules

The information provided here demonstrates the need for the proposed changes and provides further context for assessing them. It is the belief of the DECT Forum that the proposed changes will considerably improve the utilization, quality and services of the UPCS band.

The DECT Forum thanks the Commission for the opportunity to provide these comments and looks forward to the successful and effective implementation of the new bands being proposed in this rulemaking.

Respectfully submitted,

DECT Forum

December 12, 2009
for the DECT Forum
Erich Kamperschroer
Chairman of the DECT Forum

8 Annex A - Proposed Changes in 47 CFR 15.323

The DECT Forum has proposed that the threshold requirement associated with the least-interfered-channel rule in 47CFR15.323(c)(5) be eliminated and that the minimum number of channels to be monitored be reduced to 20. These changes would amend 47CFR15.323(c)(5) from:

> *If access to spectrum is not available as determined by the above, and a minimum of 40 duplex system access channels are defined for the system, the time and spectrum windows with the lowest power level below a monitoring threshold of 50 dB above the thermal noise power determined for the emission bandwidth may be accessed.*

To:

> *If access to spectrum is not available as determined by the above, and a minimum of 20 duplex system access channels are defined for the system, the time and spectrum windows with the lowest power level may be accessed.*